Attachment 6: Program Preferences

The multi-benefit projects included in this Proposal from the Santa Cruz IRWM address the Human Right to Water, the IRWM Program Preferences, and Statewide Priorities with a high degree of certainty. This attachment summarizes the preferences and priorities addressed by each project, including the level of certainty, breadth, and magnitude to which the Program Preferences are met. The three agencies that are sponsoring these projects are associated with about 240 square miles or almost 2/3 of the approximately 380 square mile IRWM region.

Human Right to Water Policy

California's Human Right to Water Policy (Policy) states that every human being has the right to clean, affordable, and accessible water for human consumption, cooking, and sanitary purposes. The goals, priorities, and strategies of Santa Cruz IRWM Plan present a comprehensive regional approach and demonstrate a commitment towards realizing the goal of the Human Right to Water Policy. The Region's prior IRWM Implementation and Planning grants included projects to benefit disadvantaged communities (DACs). To date, more than 70 IRWM projects have been implemented in the Santa Cruz region. This includes projects to: address drinking water contamination; improve drinking water infrastructure to improve water quality and to ensure an adequate drinking water supply; and, improve the reliability and quality of drinking water delivered to DACs.

The proposed projects further Regional efforts in line with the state Policy. As a statewide leader in conservation, the City of Santa Cruz has reduced residential water use per day to 42.7 gallons in June 2015. However, after four dry years the City is at risk of not meeting existing drinking water demands except for with the use of intensive water rationing measures. The City has declared a Stage 3 Water Emergency. The proposed Tait Wells project would bolster the City's limited supply by replacing two failing wells and rehabilitating a third to increase their production capacity from 153 AFY to 706 AFY. This provides benefit to all residents, including DAC communities that comprise 36% of those served, in a service area otherwise at risk of inadequate supply to meet water needs. Soquel Creek Water District's proposed Bonita Treatment Facility would serve 38,000 residents in mid-County, 9% of which are DACs. All residents in the service area are groundwater dependent. Reducing the elevated levels of hexavalent chromium present in roughly 1/3 the District's groundwater wells provides health and safety benefits for all customers.

In 2013-14, the Region conducted a DAC Pilot Project with IRWM funding support from DWR to engage DACs, identify water-related needs, and advance projects to address needs. This included efforts in the coastal community of Davenport where a recycled water facility was identified as a potential project to address critical water quality needs by providing wastewater treatment to prevent surface water contamination and meet discharge standards. In 2015, a feasibility study on the Davenport Recycled Water System was completed with funding by the Clean Water State Revolving Fund Program and Water Recycling Funding Program – the recommendations of that study directly inform the proposed project. The facility would assist the community in meeting important health and safety goals and assists in advancing specific objectives in the IRWM Plan and more broadly the Human Right to Water Policy.

Program Preferences

The Santa Cruz IRWM region does not import water and is solely reliant on local supplies to meet both human and environmental needs. To meet the significant challenges posed by the limited local supply, the IRWM partner agencies conducted a comprehensive assessment of resource management strategies and projects during the 2014 IRWM Plan update. The Plan's priorities and the scoring criteria used by Region to evaluate projects in the Plan, as well as, specific to this 2015 IRWM Implementation, directly reflect the Program Preferences. All three of the proposed projects meet multiple Program Preferences of the 2015 IRWM Guidelines.

Tait Wells Replacement (City of Santa Cruz)

Program Preferences addressed by this Project include:

1. **Include Regional Projects or Programs** –The supply from these wells drawing underflow from the San Lorenzo River will improve water quality and the reliability of the water supply portfolio in droughts. This minimizes user impacts by meeting demand with a water source that does not worsen seawater intrusion as the City fulfills a 2015 Cooperative Management Agreement with IRWM Partner Soquel Creek Water District as part of regional efforts to protect groundwater from seawater intrusion. The improved supply also provides regional benefits by enhancing the City's capability for future regional emergency water transfers amongst agencies via system interties, a high priority strategy in the IRWM Plan.
2. **Effectively Integrates Water Management Projects/Programs within Hydrologic Region –** The project provides greater supply reliability from the integrated management of North Coast, San Lorenzo, and Loch

Lomond source water supplies, increasing the flexibility for water managers to meet requirements for habitat conservation, water supply and water quality.

3. **Effectively Resolve Significant Water-Related Conflicts within or between Regions** – Drought reduces an already limited water supply exacerbating conflicts between water for human use and ecosystem needs. The Tait Wells provide a water source that enhances operational flexibility to manage bypass flows for fishery benefits, supporting the City's related Habitat Conservation Plan to benefit salmonids.
4. **Address critical water supply or water quality needs of a DAC** – 36% of residents served meet the DAC criteria and will benefit from the replacement of water supply wells that have exceeded their useful life and improvements to the supply system needed to assure the continued reliable delivery of safe drinking water.
5. **Effectively Integrate Water Management with Land Use Planning** – The City's Water Supply Assessment General Plan 2030 describes water supply and demand projections. The project will improve the City's water supply by restoring the reliable and sustainable production from the Tait Wells.

Statewide Priorities addressed by this Project include:

- ✓ **Drought Preparedness –** The rehabilitated wells will be able meet ¼ of peak season demands (under Stage 3 rationing), this allows more water to be kept in Loch Lomond as drought reserve. It also improves the ability to conjunctively manage surface water and groundwater, thus better enabling long-term drought preparedness.
- ✓ **Use and Reuse Water More Efficiently** – This project implements an expanded water supply reliability element consistent with the City's urban water management plan and the IRWM plan.
- ✓ **Climate Change Response Actions** –A USGS study indicates that extended dry seasons and multi-year droughts that may occur more frequently with climate change results in less recharge of coastal aquifers.[1] With this project, the City can better utilize underflow from the San Lorenzo River providing a valuable drought and climate change adaptive management tool, providing peak season water which offsets pressure to increase groundwater pumping from the City's Live Oak wells in the Purisima formation impacted by seawater intrusion.
- ✓ **Ensure Equitable Distribution of Benefits** –DAC residents, 36% of the population, share in the benefit of a more resilient water supply to meet the essential needs of residents, particularly during extended dry periods.

Certainty, Breadth and Magnitude of Preferences and Priorities Being Met: This project has a **high** level of certainty of meeting these preferences. The project relies on established construction methodology and there are no known regulatory or institutional obstacles to the wells' rehabilitation. The enhanced supply and increased operational flexibility provides **local** and **regional** benefits of a moderate magnitude as the wells represent a portion of the City's water supply. The City of Santa Cruz is the largest water supplier in the region, serving 95,244 residents, approximately 38% of residents in the IRWM Region. With the potential benefits to mid-County residents through future conjunctive use, the potential future benefits extend to almost 50% of residents in the IRWM Region.

Bonita Hexavalent Chromium Treatment Facility (Soquel Creek Water District)

Program Preferences addressed by this Project include:

1. **Include Regional Projects or Programs** – Approximately 35% of the District's water supply has naturally occurring elevated Chromium-6 levels (5 to 40 ppb) and exceed the recently adopted Chromium-6 MCL limit (10 ppb). The proposed facility would reliably and sustainably produce 1,600 AFY of high quality drinking water. This would enable supply to reciprocate future exchanges with neighboring surface water agency, City of Santa Cruz, during emergencies or drought as part of a regional water exchange program. The project furthers progress toward the Basin Management Objectives in the District's Groundwater Management Plan.
2. **Effectively Integrates Water Management Projects/Programs within Hydrologic Region** – This facility helps to ensure a reliable local water supply through strategies that diversify the supply portfolio, enables production from available sources, and enhances management of the groundwater basin. The project advances multiple high priority regional strategies in the IRWM Plan including regional conjunctive use, system interties, and promoting sustainable groundwater use. The project integrates efforts of the Soquel-Aptos Groundwater Management Committee (City of Santa Cruz, County of Santa Cruz, Central Water District, and Soquel Creek Water District) to protect against seawater intrusion and efficient management of the groundwater basin.
3. **Effectively Resolve Significant Water-Related Conflicts within or between Regions** – The District and users in the mid-County area rely solely upon groundwater. Overdraft, seawater intrusion, and Chromium-6 pose significant threats to water supply and current beneficial uses leading to conflict amongst users. Without this project, 1/3 of the District's supply will not meet drinking water quality standards thus further reducing a limited supply and would increase reliance on other coastal wells that are subject to seawater intrusion. Drought conditions have reduced recharge, exacerbating groundwater quality issues. This project reduces

[1] Flint and Flint, 2012. USGS. Simulation of Climate Change in San Francisco Bay Basins, California; Case Studies in the Russian River Valley and Santa Cruz Mountains

conflict within the region by increasing supply and facilitating the participation in the previously described regional efforts to ensure the long-term sustainability of the basin.

Statewide Priorities addressed by this Project include:

- ✓ **Drought Preparedness** – This project provides for efficient groundwater basin management as well as supply to support future District participation in regional conjunctive use via inter-agency system interties.
- ✓ **Use and Reuse Water More Efficiently** – This project implements expanded water supply reliability consistent with the District's urban water management plan and the IRWM plan.
- ✓ **Climate Change Response Actions** – This project promotes climate change adaptive management strategies by advancing the District's ability to participate in regional conjunctive management efforts.
- ✓ **Protect Surface Water and Groundwater Quality** – This facility provides supply that reduces the District's reliance on coastal wells that are subject to seawater intrusion and groundwater quality degradation.

Certainty, Breadth and Magnitude of Preferences and Priorities Being Met: This project has a **high** level of certainty of meeting these preferences. The proposed facility is based upon recent feasibility and technical studies identifying the most favorable technology and demonstrating the treatment effectiveness[2,3]. CEQA documents are to be completed in September 2015; permitting and design are underway. The enhanced supply provides **local** and **regional** benefits of **high** magnitude as the District is the largest supplier in mid-County, serving 38,000 residents, approximately 15% of population of the IRWM Region. Intertie infrastructure is currently in place and inter-agency agreements could enable future water exchanges. In 2015, the District and City of Santa Cruz established a Cooperative Monitoring/Adaptive Management Agreement on groundwater pumping.

Davenport Water Recycling Facility (County of Santa Cruz, Davenport County Sanitation District)

Program Preferences addressed by this Project include:

1. **Effectively Integrates Water Management Projects/Programs within Hydrologic Region –** This project integrates regional IRWM strategies to ensure a reliable and sustainable local water supply by implementing projects to diversify the supply portfolio with alternative sources such as recycled water. The Central Coast Regional Water Quality Control Board provided a letter "strongly supporting" grant funding for the facility.[4]
2. **Address critical water supply or water quality needs of a DAC** – The small community of Davenport meets the disadvantaged community (DAC) criteria as its median household income is less than $48,875. Community outreach in 2013-14 as part of the Santa Cruz IRWM DAC Pilot Project confirmed wastewater system improvements as a critical need. High priority projects identified included the construction of a recycled water treatment facility and increased capacity of the existing facility's storage lagoon. The RWQCB issued a Notice of Violation on Waste Discharge Requirements in 2011 for failure to maintain the necessary freeboard levels in the lagoon and increasing risk of surface spills resulting in discharges to the Pacific Ocean. The proposed project addresses two Critical Water Quality Need Program Preferences: 1) providing wastewater treatment required to prevent surface water contamination; and, 2) to protect beneficial uses and meet a discharge standard. Meeting these needs will increase the health and safety of the community.
3. **Effectively Integrate Water Management with Land Use Planning** – The existing facility treats 28 AFY to Title 22 level, and the treated water is spray irrigated onto adjacent vacant grassland. The proposed project will reuse this valuable water resource for high value crop irrigation. Providing this much-needed agricultural water supply is consistent with the County's Agricultural Land Preservation policies in the County General Plan.

Statewide Priorities addressed by this Project include:

- ✓ **Drought Preparedness** – Recycled water will increase local water supply and reliability during water shortages.
- ✓ **Use and Reuse Water More Efficiently** – The proposed reuse provides a reliable, local water supply that reduces vulnerability to droughts and provides a source for beneficial reuse on nearby agricultural lands.
- ✓ **Climate Change Response Actions** – Water recycling is a management action under this Statewide Priority.
- ✓ **Protect Surface Water and Groundwater Quality** – The proposed facility improvements will upgrade the existing infrastructure deficiencies and better protect against water pollution from wastewater discharges.
- ✓ **Ensure Equitable Distribution of Benefits** – This project addresses wastewater treatment needs of a DAC.

Certainty, Breadth and Magnitude of Preferences and Priorities Being Met: If project funding is secured, there is a **high** level of certainty of meeting these preferences. The proposed project implements the recommended alternative identified in the 2015 Feasibility Study on the Davenport Recycled Water System. The Central Coast Regional Board noted it would support the project by "quickly facilitating the required permitting".[4] The proposed project has **local** benefits of **high** magnitude to the community of Davenport and local area residents.

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[2] Water Research Foundation, 2014. Hexavalent Chromium Treatment with Strong Base Anion Exchange (Project No. 4488).
[3] Black & Veatch, 2015. Basis of Design Bonita Water Treatment Plant - Hexavalent Chromium Removal Treatment System
[4] Packard, Harvey. Central Coast RWQCB 4/3/15. Letter of Support Davenport Sanitation District's Recycled Water Project